

(No Model.)

R. B. LOCKE.

LIFE GUARD AND TRACK CLEARER.

No. 287,036.

Patented Oct. 23, 1883.

Fig. 1.

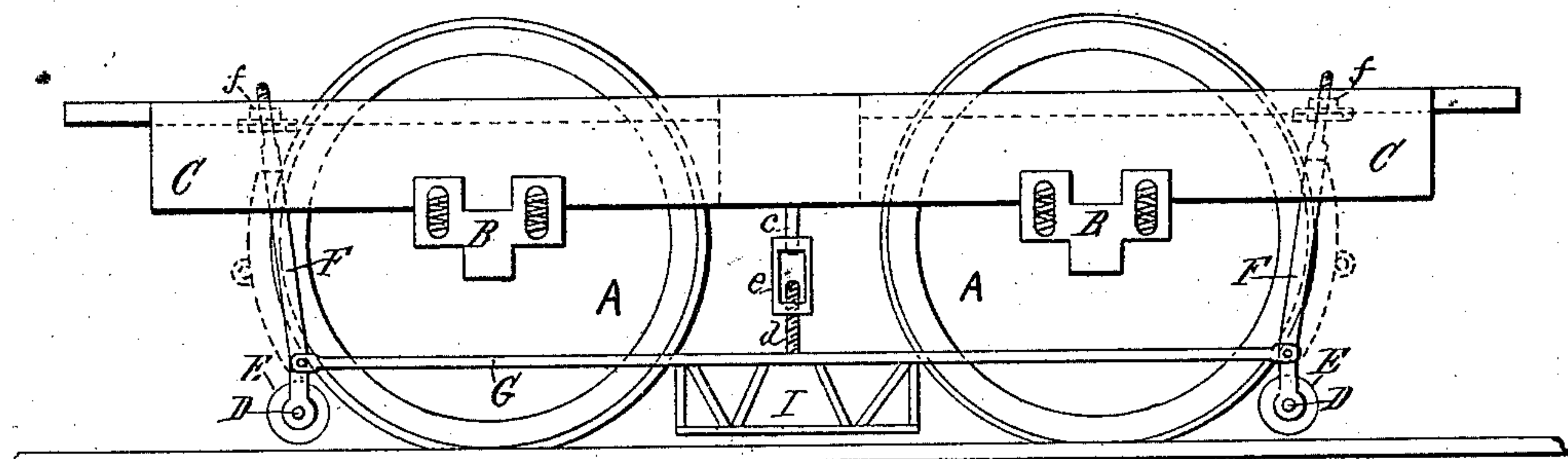
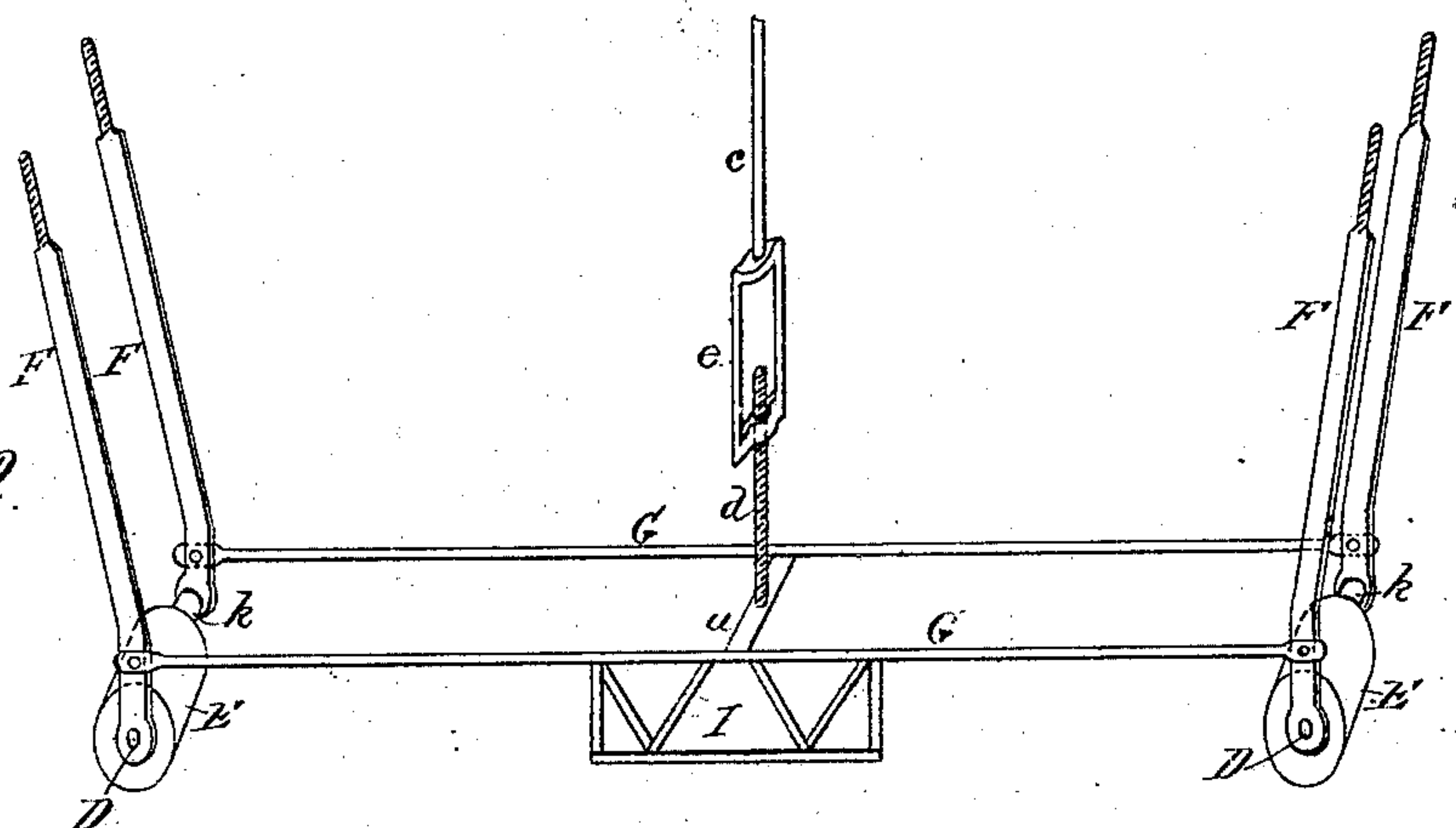
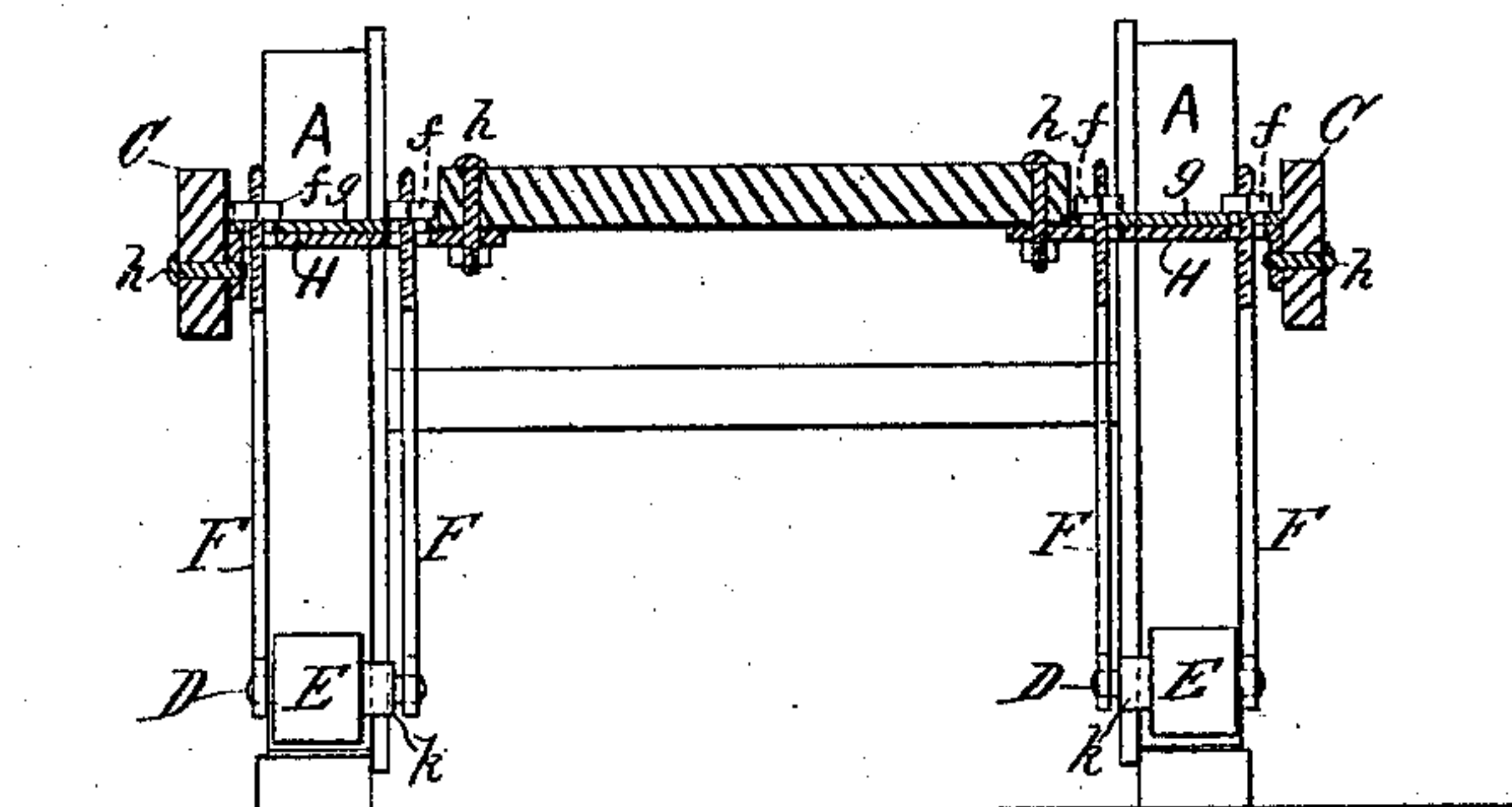


Fig. 2



F63.



Witnesses.  
John Tucker.  
F. W. Hamford.

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Inventor.  
By Nathaniel Wood,  
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# UNITED STATES PATENT OFFICE.

RICHARD B. LOCKE, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-FOURTH  
TO CHARLES W. HELD, OF SAME PLACE.

## LIFE-GUARD AND TRACK-CLEARER.

SPECIFICATION forming part of Letters Patent No. 287,036, dated October 23, 1883.

Application filed August 21, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, RICHARD B. LOCKE, of Brooklyn, county of Kings, and State of New York, have invented certain new and useful  
5 Improvements in Life-Guards and Track-Clearers, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

10 My present invention has relation to that class of devices commonly used upon street-railways for the purpose of preventing any object upon the track from being run over by the wheels, being an improvement upon the  
15 device for which I obtained Letters Patent of the United States October 19, 1880, No. 233,359. As in that patent, the present improved arrangement might be applied in connection with other trucks and wheels used  
20 upon railways.

Among the chief objects of my improvements are the coupling of the forward and rear life-guards and track-clearers, so that they will  
25 move together, and so that they may be suspended from the body of the car in such a manner as to admit of all the jolting and jumping movements of the car without interfering with their efficiency, and to provide simple and easily-  
30 operating means for adjusting the track-clearers to the proper level; to provide each outside tie-rod uniting the front and rear fenders or life-guards with a protecting frame or guard between the car-wheels, (on either side of the  
35 vehicle,) and to render the attachments easy to be mounted in place without interfering with the axle-boxes of the car-truck.

To accomplish all of this, my improvements involve certain novel and useful peculiarities of construction and relative arrangements or  
40 combinations of parts, all of which will be herein first fully described, and then pointed out in the claims.

In the accompanying drawings, forming part of this specification, Figure 1 is a side elevation, showing my improved device as applied  
45 in connection with the wheels of an ordinary horse-car. Fig. 2 is a perspective view of the life-guard and track-clearer attachments detached from the car; and Fig. 3 is a partial  
50 section and end elevation illustrating the ap-

pliances arranged to operate in connection with the car-wheels.

In all these figures like letters of reference, wherever they occur, indicate corresponding  
55 parts.

A A are the car-wheels of any ordinary car-truck, B B the axle-boxes, and C C the string-pieces, upon which the bolster and car-body may be supposed to be supported. These  
60 parts are not material features of the invention, and may be of any approved or preferred pattern.

D are the axles upon which the revolving track-clearers or guards E are mounted, said track-clearers consisting of blocks of metal or  
65 other suitable material, and each so mounted that it will revolve as soon as its surface is brought into contact with the wheel of the car. The guard-axles D are supported by rods F F, connected with the body of the car, and the  
70 guards are hung by these so that they (the guards) will ride clear of the car-wheels and within the angular space between said wheels and the track. The guards are mounted outside of the wheels of the car or truck, so that,  
75 whatever be the direction of the vehicle, a guard is always in advance of the forward wheel. The supporting-rods F F, on each side of the truck, are connected by two rods, G G, one on each side of the two wheels.  
80 These two tie-rods serve to brace and stiffen the guard appendages, and to prevent them from becoming disarranged. Any object upon the track will, when the car is moving toward  
85 it, drive the guard up against the wheel, which will then communicate a rapid rotary motion to the guard, which in turn will force the object from off the track, and this without undue  
90 shock or jar to the car or undue damage to the object, (as in case the object be a hand or foot or other part of the body.)

Between the two tie-rods is a cross-piece, *a*, with which is connected an adjusting device, by which the height of the guards above the  
95 track can be regulated. This adjusting device is composed of a divided rod, one section, *c*, of which is connected with the car-timbers, and the other section, *d*, with the cross-piece  
100 *a*, the two sections being united by an adjusting-nut, *e*, the turning of which will elevate



or depress the tie-rods, and with them the two guards, as will be readily understood. The rods F F pass through slots in a metallic plate, H, secured to the car-timbers, as by the bolts *h h*, and are provided with nuts *f f*, which bear upon a loose bearing-plate, *g*, the slots in plate H being large enough to afford free movement of the rods F F up and down, and also a limited movement in a side direction. Being thus connected with the car-body, the guards may move up and down, so that as the car jolts, causing the guards to strike the track, they will not be damaged in any way. When one of the guards is forced up against the car-wheel, the tie-rods force the other guard away from its wheel, and thus both guards are made to move simultaneously. The main parts of the revolving guards are intended to strike against and receive their motion from the tread of the car-wheel, and each guard has a narrow part, *k*, extending by the flange of the car-wheel. This narrow part *k* enables the main part of the guard to strike against the tread of the wheel.

Extending down from each outside tie-rod is a light frame-work, I, of any approved pattern, the purpose of which is to close the space between the two car-wheels, so as to prevent persons or objects from falling in between the wheels. By attaching the frame-work to the rod on each side, the frame-work is swung independently of the car-body, is adjustable up and down with the fenders, and requires no fastening additional to that for attaching the fenders.

The attachments as above described, being well made and properly adjusted, answer all the purposes or objects of the invention as previously set forth.

The improvements may be applied upon any of the ordinary forms of street-cars without interfering with the axle-boxes, and only requiring the attachments to be made for the reception of the supporting-rods. The ends of the supporting-rods passing into the interior of the car are readily accessible, so that the nuts thereon may be turned up or loosened, as required; and these ends may be conveniently concealed beneath the box usually employed for covering the wheels, which also project into the car.

I am aware that wheel-fenders arranged to travel in front of the car-wheels have before been arranged so that they could be moved up and down, but am not aware that such

adjustable fenders have ever before been arranged to strike the car-wheel and receive motion from the wheel; but in my former patent above named (No. 233,359) the fenders receive their motion upon striking the car-wheel, although they are not adjustable up and down, as in the present case.

Having now fully described my invention, what I claim as new herein, and desire to secure by Letters Patent, is—

1. The revolving guards axled between two supporting-rods, said rods being movable up and down, as explained, so as to accommodate the guards to various movements of the car and permit the guards to swing against the car-wheels, as and for the purposes set forth.

2. In combination with a revolving guard arranged to strike against and receive motion from the car-wheel, the two supporting-arms, each of which is provided with adjusting-nuts, substantially as and for the purposes set forth.

3. In combination with the rods which support the revolving guards, the two tie-rods, substantially as shown and described.

4. In a safety appliance for railway-cars, wherein the revolving guards are arranged to strike against the car-wheels in the manner explained, the combination, with the exterior tie-rod uniting two of the guard supporting-rods, of the frame-work closing the space between the car-wheels, substantially as and for the purposes set forth.

5. The herein-described block suspended in front of a car-wheel, and arranged to be revolved as soon as it is forced into contact with said wheel, the same having a narrow portion to escape the flange of the wheel, thereby permitting the main part of the revolving block to strike against the tread of the wheel, said block being provided with a suitable axle, substantially as shown and described.

6. In combination with the two tie-rods connecting the supporting-rods, in which the guard-axles are mounted, the cross-piece and the attached adjusting device connected with the frame-work of the car, substantially as shown and described.

In testimony that I claim the foregoing I have hereunto set my hand in the presence of two witnesses.

RICH. B. LOCKE.

Witnesses:

F. W. HANAFORD,  
WORTH OSGOOD.